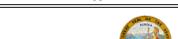
#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-001994 Address: 333 Burma Road **Date Inspected:** 16-Apr-2008

City: Oakland, CA 94607

**OSM Arrival Time:** 1400 **Project Name:** SAS Superstructure **OSM Departure Time:** 2300 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Sun Wie **CWI Present:** Yes No Yes **Inspected CWI report:** N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: Deck Panels** 

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG bay 1 (Gantry 1)

QA observed ZPMC qualified welding personnel perform the SAW welds joining the closed U-Ribs to deck panels DP-416-001 and DP-217-001. QA observed 5 ZPMC QC inspectors in the vicinity of the welding operations including ZPMC CWI identified as Sun Wie. There were also 4 American Bridge/Fluor (ABF) inspectors in the area as well. QA and QC inspectors performed a random visual inspection of the GMAW root welds on these panels. All completed GMAW welds appeared to meet the requirements of the contract documents. QA and QC monitored the welding process continuously throughout the evening. QA completed a production panel welding reports for deck panels DP-416-001 and DP-217-002. The reports are on file in the Caltrans QA office. The welder identifications and the welding parameters as measured with the calibrated gages on the machines appeared to be in conformance with the posted WPS's and were as follows:

DP-416-001 SAW

Volts: 24.1 – 25.5 Amps: 673 – 690 Travel speed: 515mmpm

Welder ID#'s

## WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Weld joint 1: 059416 Weld joint 2: 059421 Weld joint 3: 059416 Weld joint 4: 059421 Weld joint 5: 059403 Weld joint 6: 059378 Weld joint 7: 059403 Weld joint 8: 059378 Weld joint 9: 059361 Weld joint 10: 062265

DP-217-001 SAW

Volts: 24.2 - 25.6Amps: 671 – 687 Travel speed: 510 - 515mmpm

Welder ID#'s

Weld joint 1: 062265 Weld joint 2: 059361 Weld joint 3: 059378 Weld joint 4: 059403 Weld joint 5: 059378 Weld joint 6: 059403 Weld joint 7: 059421 Weld joint 8: 059416 Weld joint 9: 059421 Weld joint 10: 059416

Gantry 2 (idle)

QA performed visual verification inspection for completed welds on deck panel DP-487-001. All welds that were inspected appeared to exhibit some degree of undercut, lack of fusion, overlap, oversize and/or under fill. All of the Partial Joint Penetration (PJP) welds joining U-Rib to deck plate that have inspected on this panel do not appear to comply with the visual acceptance criteria specified in AWS D1.5 2002 and the contract documents and have been rejected by ZPMC and ABF QC inspectors. QA completed a Caltrans QA visual verification weld inspection report for the OBG deck panel mentioned above. The report is on file in the Caltrans QA office.

Other general observations by QA were as follows:

QA observed ZPMC has approximately 60-70 workers performing various functions relative to the fabrication of the OBG Deck Panels. These functions include; closed rib press forming, hole drilling at ends of U-Ribs using a drill template, PJP bevel preparation, closed rib splice FCAW welding, closed rib diaphragm fit-up and FCAW welding, closed rib to deck plate fit-up and tack welding.

## **Summary of Conversations:**

Only general conversations were held between QC inspectors and QA concerning this project.

# WELDING INSPECTION REPORT

(Continued Page 3 of 3)

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowry (858)-344-2712, who represents the Office of Structural Materials for your project.

Inspected By:	Hall,Steven	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer